

GEIGER

PARTNER TO THE SUN

Tubular motor:

GEIGER-SOLIDline ../55

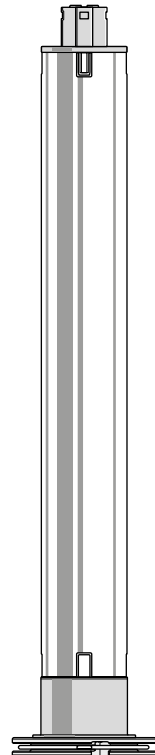
Motor control:

GEIGER-SoftZero-55 (GU45..E02)

for facade awnings, screens and ZIP screens

EN Operating Instructions

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1. Characteristics of the GEIGER-SoftZero-55

Universal electronic motor for facade awnings

- Facade awnings, screens and ZIP screens can be operated with the **GEIGER SoftZero-55**.

Safety

- A safe locking of the facade awning/screen through torque shutoff

Fabric Protection

- GEIGER-Locking power minimisation (automatic function)
- GEIGER-Powertronic (manual function: power level)

...for a nice long lasting fabric.

Hanging Length Adjustment

- Modifications in fabric lengths are recognised and compensated for.

Obstacle Recognition

- Active obstacle detection when extending the installation
- Protection of the awning system by retracting the equipment

GEIGER-Operating Radius Identification

- Modern electronic control identifies the equipment's torque curve, and makes available to the motor the exact amount of power needed during operation, and while closing.

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2. General information

Dear customer,

By purchasing a GEIGER tubular motor you have decided on a quality product from GEIGER.

Thank you very much for your decision and the confidence placed in us.

Before you put this drive into operation please observe the following safety information. It serves for the prevention of danger and for the avoidance of personal injury and damage to property.

Please retain this information for future reference.

- ▶ **For all facade awnings, screens and ZIP screens**
- ▶ **Drives are switchable in parallel**
- ▶ **Automatic detection of right/left installation**

3. Guarantee

In the case of incorrect installation contrary to the operating instructions and/or constructional modification, the legal and contractual guarantee for property damage and product liability lapses.

4. Safety information



ATTENTION: Important safety information. For personal safety, it is important to follow these instructions. The instructions should be kept.

- ▶ **This appliance is not to be used by persons (including children) whose physical, sensorial or mental capacities are impaired, or who have no experience or know-how, unless they have been supervised or been given instructions on the use of the appliance by someone who is responsible for their safety.**
- ▶ **Children must be supervised to make sure they do not play with the appliance.**
- ▶ **The installation is to be checked regularly for defective balance, wear and damage.**
- ▶ **Damaged connecting leads must be replaced by the GEIGER connecting lead of the same wire type.**
- ▶ **During operation observe the danger zone.**
- ▶ **If person or objects are in the danger zone, do not use the installation.**
- ▶ **Urgently shut down damaged installations until repair.**
- ▶ **Unconditionally shut down the unit during maintenance and cleaning operations.**
- ▶ **Pinching and shearing sites are to be avoided and to be safeguarded against.**
- ▶ **When operating the manual actuator with the open sun protection system, exercise caution as it can fall down quickly if springs expand or are broken.**

- ▶ Do not operate the device if operations such as, for example, window cleaning are to be carried out in the vicinity.
- ▶ Disconnect the device from the mains power supply if operations such as, for example, window cleaning are being carried out in the vicinity.



ATTENTION: Important safety information. Follow all installation instructions, as incorrect installation can lead to serious injuries.

- ▶ Connection must be carried out by a skilled electrician according to the regulations in force locally.
- ▶ The mains plug of the tubular motor must be accessible after installation.
- ▶ On the installation of the tubular motor without mechanical protection of the driven parts, the tubular motor must be installed at a height of at least 2.5 m above the ground or of another level which provides access to the drive.
- ▶ Before the tubular motor is installed, all leads which are not needed are to be removed and all equipment which is not needed for actuation is to be put out of operation.
- ▶ If the tubular motor is controlled by a switch or pushbutton, the switch or pushbutton must be mounted within eyeshot of the tubular motor. The switch or pushbutton must not be located in the vicinity of moving parts. The height of installation must be at least 1.5 m above the floor.
If the apparatus is equipped without a pin and a socket connector (STAS3K) in the connecting lead, or other means for disconnecting from the mains with at least a 3 mm contact opening on each pole, a disconnecting device of this type must be incorporated into the permanently installed electrical installation according to the wiring rules.
- ▶ Permanently installed control devices must be attached visibly.
- ▶ The correct dimensioning of the drive is to be observed.

5. Intended use

The tubular motors of the model range **SOLIDline/55** with the **SoftZero-55** system are designed exclusively for the operation of facade awnings, screens and ZIP screens.

If the tubular motors are used for other applications and/or modifications are performed to the tubular motors, which have not been discussed with GEIGER Antriebstechnik, then the manufacturer is **not** liable for personal injury and/or damage to property and for consequential damage.

6. Installation instructions

Before fixing, the strength of the masonry or of the subsurface is to be checked.



Caution: If the tube is screwed/riveted to the drive, the measure must be taken from the tube end to the center of the drive and marked on the tube.

When drilling the winding shaft never drill into the area of the tubular motor!

When inserting into the shaft, the tubular motor must not be struck and must not be allowed to fall into the shaft.

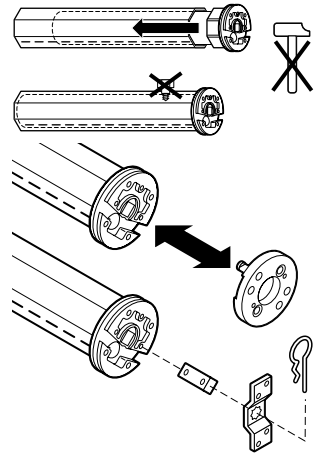
Installation into facade awnings and screens:

Insert motor with a suitable adapter and drive into the shaft up to the stop of the shaft adapter.

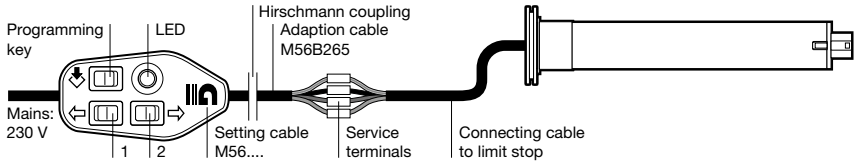
Fix the motor support on the awning. Fix the motor together with the shaft on the motor support. The bearer locks into place.

Depending on the selected motor head, different fixation systems can be used:

- Place the motor with square insert in the star-shaped bearer and lock with pin
- Place the motor into the existing engine bearer and lock
- Place the motor in a compatible engine bearer with clip system and lock with spring or rotating lever



7. Setting of the end stops



Connect the setting cable to the connecting cable of the **GEIGER SoftZero-DG**. When doing so, take care to ensure that the colours of the different leads do tally with each other. The assignment of the direction keys 1 and 2 to the direction of rotation is dependent on the installation situation of the motor. Then connect the setting cable to the 230V mains.

Setting of the lower end position

Press the programming key until the LED blinks 1 x, then release the programming key. Run the motor with the direction keys to the desired lower end position. Press the programming key - the LED blinks 2 x.

Setting of the upper end position (Torque shutoff)

Run the motor with the direction keys to the desired upper end position. When the upper end position is reached, the motor turns off automatically the learning process. The programming is finished and the motor returns to normal operation.



There is no need to first delete the end stops (memorised) if you wish to modify them.

8. Correction of the end stops

If a lengthening/shortening of the hanging has resulted due to e.g. temperature changes, this will be automatically corrected by closing the awning.

If, due to temperature changes, modified winding behaviour should arise and the hangings should run against the stop, an immediate end position correction takes place.

After the first reference run, the motor automatically identifies the torque necessary to close the awning and closes it with the lowest possible power, so that the fabric is optimally protected.

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9. GEIGER Powertronic

The GEIGER Powertronic enables the user to change the motor's closing characteristics. The user can raise or reduce the closing power applied through the motor. This way, he or she influences the closing characteristics of the casing. A rise in the closing power causes a tighter closing of the casing with increased stress on the fabric; a reduction in the closing power causes a looser closing and less strain to the fabric.

Closing power levels: from level 0 to level 7

GEIGER-delivery setting: level 0



Caution: By manually raising the closing power (e.g. from level 0 to level 3) the fabric endures more strain.

In which situations is the GEIGER Powertronic applied?

- If the casing does not completely close.
- If the closing operation should be optimised for better fabric protection.

When can the GEIGER Powertronic be applied?

- Anytime; this function can be activated during initial operation, as well as at a later date.

Which resources are necessary?

- GEIGER setting cable M56K144 (D), M56F150 (CH) or M56F151 (D with service terminal)

Please note:

- The stop positions are not affected when the GEIGER Powertronic is activated.
- The selected power level is not affected when the end stop positions are changed
- Only activate the GEIGER Powertronic after the stop positions have been taught-in and a complete reference run has been conducted.

GEIGER Powertronic – changing the power levels

Connect the setting cable to the connecting cable of the motor. When doing so, take care to ensure that the colours of the different leads do tally with each other. Then connect the setting cable to the 230V mains.

Activating the GEIGER Powertronic

Press the programming key about 8 seconds until the LED blinks 3 x, then release the programming key.

Changing the power levels

The motor is delivered with the power level 0. In order to increase the force press key 2. Press key at least 2 seconds and stop at least 2 seconds. In order to reduce the force press key 1. In order to store the selected level, press shortly the programming key – the LED lights up. **The adjustment process is finished.**

10.Obstacle detection

If, after teaching-in, the first complete, uninterrupted run from one stop position to the other is conducted, the necessary torque will be taught-in.

With each successive complete and uninterrupted run from one stop position to the other, the necessary torque is automatically readjusted. Slow changes to the equipment through aging, contamination, the cold or heat are accounted for in this regard. This process takes place for both running directions independently of one another.

Should UPWARD movement be blocked by an obstruction, the motor turns off and a short reverse movement occurs.

The direction of movement in which the obstruction was detected is locked.

The device will be unlocked if the motor is run for a short time period in the opposite direction. The obstruction must also be removed before the motor can be rerun in the direction of the obstruction.



Because of the motor sensitive obstacle detection, the correct dimensioning of the torque for the respective installation size is essential.

In the following table please find a selection aid to find out the right motor size:

		Weight of bottom bar [kg]												
		1	2	3	4	5	6	8	10	12	15	20	25	30
Winding diameter [mm]	50	0,2	0,5	0,7	1,0	1,2	1,5	2,0	2,5	2,9	3,7	4,9	6,1	7,4
	55	0,3	0,5	0,8	1,1	1,3	1,6	2,2	2,7	3,2	4,0	5,4	6,7	8,1
	60	0,3	0,6	0,9	1,2	1,5	1,8	2,4	2,9	3,5	4,4	5,9	7,4	8,8
	65	0,3	0,6	1,0	1,3	1,6	1,9	2,6	3,2	3,8	4,8	6,4	8,0	9,6
	70	0,3	0,7	1,0	1,4	1,7	2,1	2,7	3,4	4,1	5,2	6,9	8,6	10,3
	75	0,4	0,7	1,1	1,5	1,8	2,2	2,9	3,7	4,4	5,5	7,4	9,2	11,0
	80	0,4	0,8	1,2	1,6	2,0	2,4	3,1	3,9	4,7	5,9	7,8	9,8	11,8
	85	0,4	0,8	1,3	1,7	2,1	2,5	3,3	4,2	5,0	6,3	8,3	10,4	12,5
	90	0,4	0,9	1,3	1,8	2,2	2,6	3,5	4,4	5,3	6,6	8,8	11,0	13,2
	95	0,5	0,9	1,4	1,9	2,3	2,8	3,7	4,7	5,6	7,0	9,3	11,6	14,0
	100	0,5	1,0	1,5	2,0	2,5	2,9	3,9	4,9	5,9	7,4	9,8	12,3	14,7
110	0,5	1,1	1,6	2,2	2,7	3,2	4,3	5,4	6,5	8,1	10,8	13,5	16,2	
		3 Nm					6 Nm			9 Nm		12 Nm		

These are estimated values so please check the correct functioning of the installation.



When using a wind sensor the correct functioning of the retract command under wind load should be checked by the manufacturer of the sun protection before commissioning.

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11. Technical data

Technical data of short motor SOLIDline (GU45..)				
	GU4503/55	GU4506/55	GU4509/55	GU4512/55
Voltage	230 V~/50 Hz	230 V~/50 Hz	230 V~/50 Hz	230 V~/50 Hz
Current	0,47 A	0,63 A	0,8 A	1,0 A
Cos Phi (cosφ)	>0,95	>0,95	>0,95	>0,95
Inrush current (factor)	x 1,2	x 1,2	x 1,2	x 1,2
Power	105 W	140 W	180 W	220 W
Torque	3 Nm	6 Nm	9 Nm	12 Nm
Speed of rotation	55 1/min	55 1/min	55 1/min	55 1/min
Protection type	IP 44	IP 44	IP 44	IP 44
Total length¹⁾	515,5 mm	545,5 mm	565,5 mm	585,5 mm
Operating type	S2 4 min	S2 5 min	S2 4 min	S2 4 min
Diameter	45 mm	45 mm	45 mm	45 mm
Weight	approx. 1,9 kg	approx. 2,2 kg	approx. 2,4 kg	approx. 2,7 kg

¹⁾ SOLIDline-ZN/-KS: +1 mm / SOLIDline-COM/-SIC + 4,5 mm / SOLIDline-SOC: + 4 mm

Subject to technical modifications



12. Declaration of conformity

We herewith explicitly declare that this product complies with the essential requirements and relevant directives. It is authorised for use in all EC member states and in Switzerland without any need of prior registration. The Declaration of Conformity concerning this product is available on our website: www.geiger-antriebstechnik.de.

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13. Information for the specialist electrician



Caution: Wrong installation and wrong connection can lead to serious injuries.

The adjusting cable M56K144, M56F150 or M56F151 must be used for the adjustment processes.

If required, use the adapter cable with service clamps M56B265.

The operations with the service clamps must only be carried out by a skilled electrician.

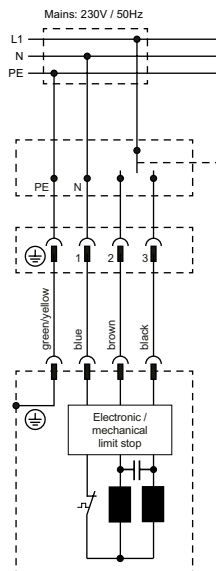
The parallel operation of several **SOLIDline SoftZero** motors is possible. Please observe the rating of the control switch used.

Please do not use any installation switch which allows simultaneous up and down controls.

PVC cables are not suitable for equipment used outdoors or exposed to prolonged high levels of UV radiation.

These cables should not be used if they are likely to touch metal parts that can heat up to temperatures exceeding 100°C.

Connecting cables with plug connectors of the Hirschmann Company, type STAS 3K or the Phoenix Mecano Company, type GLS/3+PE may only be used in connection with the Hirschmann cable socket STAK 3K.



14. Notes on waste disposal

Recycling of packaging materials

In the interest of environmental protection, please contact your local government's recycling or solid waste management department to learn more about the services it provides.

Waste disposal of electric and electronic equipment

Electronic equipment or batteries cannot be discarded along with the normal household waste. Keep for more information on the recycling and disposal methods envisaged by the local regulations in your area.

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15. What to do if...

Problem	Solution
Motor does not run.	<ul style="list-style-type: none"> • Motor not plugged in. Please check the plug connection. • Check connecting cable for possible damage. • Check the mains voltage and allow the cause of the voltage breakdown to be tested by a specialist electrician.
Instead of in the upwards direction, motor runs downwards.	<ul style="list-style-type: none"> • The control leads are interchanged. Exchange black/brown control leads.
Motor only runs in one direction.	<ul style="list-style-type: none"> • Motor in the end position. Run motor in the opposite direction.
After running several times, the motor breaks down and no longer responds.	<ul style="list-style-type: none"> • The motor became too hot and has switched off. Try it again after a cooling time of about 15 min.
The motor «hums» when the programming key is actuated. The LED lights weakly.	<ul style="list-style-type: none"> • The control leads in the STAS 3 connector are interchanged. Exchange black/brown control leads.
The motor stops between the upper and the lower end stop.	<ul style="list-style-type: none"> • The motor has detected an obstacle. Please remove the obstacle. The device will be unlocked if the motor is run for a short time period in the opposite direction.

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For technical questions, please call our service team at: **+49 (0) 7142 938-333**. They will be happy to assist you.

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